

Spatial Poverty Trap, Local Employabilities and the Impacts through International Development Assistance Programs: Scenario Analysis from Southwestern Bangladesh

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Abstract:

Reasons of poverty are very much precarious and location specific. Local culture also plays very big role as the determining factor of poverty.

In the developing countries like Bangladesh, the highly unequal distribution of limited resources in the rural areas, along with their control and use by a few, is the socio-economic source of a relation of dependence and absolute poverty. This country is in a transition period due to many societal and economic issues. Southwestern Bangladesh is one of the most under developed regions in terms of income, employability, infrastructure and education etc. Women and Children are the primary sufferers of this under-development and poverty. Nevertheless, the culture of poverty is directly related to the socio-economic negation of women and it is the end result of a culture of poverty. Social, economic and technological forces are leading to a marginalisation of women in the labour process.

This research explores the natures, features and reasons of spatial poverty and local employment situation in the south western region of Bangladesh. This study also concentrates on how international development assistance programme like, German Development Assistance Programme in Bangladesh can help to overcome this situation and create better employabilities in the poor communities specially among the extreme poor women.

Key Words: accessibility, extreme poor women, Rural Infrastructure Improvement Project, rural roads, Southwestern Bangladesh.

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Background:

Poverty has identified by different scholars from different perspectives. Sen (1999) identified it as "Capability Deprivation", and Sachs (2005) mentioned it, as "...the failure of Government". In any case, if any hypothesis of Poverty is taken into consideration, then it could be evident that the poor women are among the poorest of the rural poor in Bangladesh, specially when they are the sole heads of their households; such as widows or wives of men who have migrated in search of employment. They suffer discrimination because of their sex. They have scarce income-earning opportunities and their nutritional intake is often inadequate. Nevertheless, this discrimination including unemployment and under-employment among the rural women generate and maintain socio-economic and political exclusions.

It is very difficult to get a comprehensive idea about gender and poverty, but available information shows some key aspects (ILO, 2004). Some of them are: (a) women are disproportionately represented among the poor; (b) both the number and proportion of women among the poor have been increasing; and (c) women-headed households are more vulnerable to poverty, and the percentage of households headed or maintained by women appears to be increasing. In addition to this, in the recent years women participation in the labour force has increased mentionably. However, it has not been matched by a corresponding improvement in the quality of jobs they have access to. In most of the cases, they are under-employed and under-waged in comparison with their male colleagues, even if they get some working opportunities (ILO, 2004).

There are several regional and local level development initiatives in Southwestern Bangladesh since 2000 A.D. However, the number of most disadvantaged group of people, who have less than 1 US\$ per day income and whose per day food intake is less than 1805 Kilocalorie, has not been decreased. It has rather increased and increased the regional income disparity. From a recent Government Survey, the number of extreme poor people, who are the most disadvantaged economically and socially, in 2007 A.D was 27 million, though in the year 2000 A.D. it was 20 Million. Government has declared this information officially at the recent National Economic Budget. According to the Ministry of Finance and Planning of Bangladesh Government, in Year 2005 A.D. the total number of poor people was 93.8 Million. Simultaneously it was 91 Million in Years 2000 A. D. That means within last 5 years 2.8 Million people fall below the poverty line (Uddin, 2007).

For Bangladesh, Poverty reduction is one of the overarching development goals. The Fifth Five Year Plan (1997-2002) aimed for the first time to reduce poverty at the substantial level by accelerating economic growth, creating gainful employment opportunities as well as by increasing productivity both in local and regional level. A well convinced process for pro-poor & employment creating growth requires a holistic approach, which can be ensured to the poor people by having better access to a wide set of asset framework; e.g., physical capital to increase productivity and income both in individual as well as in collective level; enhanced human capitals to take newly emerging opportunities; financial capital to take the productive livelihoods security options; natural capital to ensure sustainability and diversity of employment options; social capital to enhance the networking capacity and facilitate management of extra-market activities; cultural capital to improve the social status and entitlements; and political capital to strengthen bargaining powers and ensure a fare access to resources and public services.

The Rural Infrastructure Improvement Project (RIIP) is a well conceived programme to combat the rural poverty. The project follows the national strategy for infrastructure improvement and socioeconomic development. This paper concentrates on the several questions focusing on the broad thematic issue relating to the impacts of improved accessibility on the most disadvantaged groups like extreme poor women in the areas which suffers from spatial poverty traps.

Literature Review:

Transport accessibility is a key element for economic and social development. However, it is crucial about the form in which the transport is made available – to whom, by whom and the extent that it is integrated into the development process (Ali-Najadfard, 1999a; Ahmed, 2008a). Since early 1980s, there are several evidences to suggest that the major investment programmes in rural roads couldn't achieve the hopes for better livelihoods of the local people (Ali-Najadfard, 1999b). Practically "gender" aspect was not fully integrated into the mainstream of either the infrastructure debate or the debate on rural transport services provision from before (Fernando and Porter, 2002a). UN Habitat also highlighted this issue in 1982 by mentioning that the ability of the poor to engage in economic activities is limited by inadequate facilities and services and is generally hindered by current transport policies. A

reform of rural transport was needed to reflect the actual needs and transport pattern of rural population (Ali-Najadford, 1999c). Some efforts were evident afterwards. Several international development agencies like Asian Development Bank (ADB), International Labour Organisation (ILO), International Forum for Rural Transport and Development (IFRTD) promoted labour intensive rural road construction as well as maintenance as the means for creating employments and incomes by incorporating women in all phases of development (Fernando and Porter, 2002b:2; Ahmed, 2008b).

A growing academic literature has been developed over the last few years addressing the complex relationships between transport and gender, both in developed and developing countries context, but recent research has brought additional knowledge concerning the comprehensive development impacts both theoretical and empirical. Some addressed the issues beyond considering the traditional Cost-Benefit Analysis.

In Bangladesh, the issues and development concerning the rural accessibility, previously addressed the moderate poor, with nominal changes in the livelihoods of the people who are extremely poor. However, since 1990s there were some structural changes in several developing countries and some modest improvement were visible within the framework in rural development for incorporating diverse beneficiary groups (Asaduzzaman, 2007). In rural Bangladesh, extreme poor women are the most disadvantage groups due to different socioeconomic, religious and cultural reasons (Ahmed, 2007a). Locally people differentiate between the poor and extreme poor by focus security status. Studies show that who can afford to eat a plate of rice with some vegetable, along with perhaps some fishes, and then they are only poor. If it is not affordable, then they are extreme poor (Dietzel, 2006).

The general characteristics of most disadvantaged people have been analyzed from different socioeconomic and transport accessibility perspectives. The level of accessibility determines the ability of individuals to participate in development and other social activities. For assessing the impacts of rural infrastructure improvement projects, there should be clear understanding of accessibility and poverty interactions, because the lack of accessibility is widely known to be a critical factor, which creates economic and social development in rural areas where the majority of the people live in the developing countries (Odoki et al, 2001a). Accessibility means the opportunity that an individual at a given location possesses to participate in a particular activity or set of activities. This depends on the available means of transportation, temporal (time) and the constraints due to spatial locations (e.g. spatial

poverty trap), which limits the ability of individuals to participate in productive activities (Odoki et al, 2001b). Accessibility concept has been used widely by the geographers (Edmond, 2004a). In developed countries, accessibility is an integral part of planning process. But in developing countries, it is rather new with the planning and provision of rural infrastructure. The effects of social and economic change produced by the rural roads are very much location specific and therefore it is difficult sometimes to standardise. In Bangladesh, some basic distinctions exist between the villages close to and those remote from paved road, but empirical evidences shows that the patterns of mobility are complex and depend on the interplay of cultural and access factors (Matin et al, 2002). International Labour Organisation (ILO) outcomes show that the lack of accessibility to basic goods and services and simultaneously is a constraint to rural development as well as contributes to low productivity of land and labour observed in rural areas (Ali-Najadford, 1999).

In many areas in developing countries, labour and land market usually develops alongside the road construction (Walle, 2002). It is believed frequently that geographical and economic development would facilitate rural markets and related complementarities associated with other social development. The regions where paved road accessibility in terms serving the people is high, the socio-economic situation of the community people at large is much better off (Nepal, 2007). Some empirical studies show that the women can make significant economic and social contributions to their families and their communities, which is often invisible, and unrecognized (Fernando and Porter, 2002c; Ahmed, 2007b). A gender analytical approach to transport planning and analysis can uncover this contribution and help initiate interventions that meet women's practical needs and reduce their time poverty.

As the poverty alleviating public policies need to address diversified capital to ensure the sustained poverty reduction through the growth process, a special problem in a labour surplus economy like Bangladesh is the persisting gap between the required and actual rates of employment creation. The current growth process is not capable alone to absorb the growing labour force. With a huge number of surplus labours, Bangladesh needs to provide additional efforts to create employment, particularly for those who have limited options for livelihoods in the remote rural areas. Within last several years, Bangladesh has undertaken several interventions of direct and indirect employment creations by promoting employment intensive infrastructure programmes. Along with creating employment opportunities for the poor, these programmes contribute to economic growth through development of infrastructures. The logical basis for these types of programmes lie in the view that such

investments are very much pro-poor in nature, and in addition to create employment for the local poor, these provide basic infrastructures and services for the rural growth (Mujeri, 2002). Extreme poor women are the integral part of these rural infrastructure investment project (Ahmed, 2008c; GITEC-GTZ, 2006)

The extreme poor women need three different types of supports for their empowerment and better livelihoods; firstly, they need employment, so that they can have access to financial resources to satisfy their basic and secondary needs; secondly, they need also special supports, like legal or medicinal supports either from the government or from other non-government sources; and thirdly they need different types of skill development trainings for their better employability (Ahmed, 2007c). This particular rural infrastructure improvement project has focused the three mentioned issues. Contemporary trend of this type of empirical analysis is just to focus on the overall rural development, not precisely on the extreme poor women. The extreme poor women need different types of policy considerations as well as further supports to be integrated in the mainstream economy. This paper is an attempt to fill that gap by focusing the perceived impacts through RIIP.

Methodology:

This study is based on a number of methodological approaches. As several factors like accessibility, employability and there impacts on extreme poor women are involved within the coverage of this empirical analysis. Prior to the operationalization of the methods and approaches, a Desk Study was undertaken. This was based largely on a synthesis of evaluation work undertaken by other researchers and development agencies.

Both qualitative and quantitative information have been collected from primary and secondary sources. Methodically, the entire research is be divided into three major stages; namely, (a) acquiring empirical primary information collection (mostly qualitative by personal interview, group discussion and personal observation); (b) collection of secondary literatures and information on theories and best practices, which was a continuing and non-ended process; and (c) combination and analysis of qualitative and quantitative information.

Moreover, there was a continuing attempt to understand the local scenarios from different socio-political-economical and environmental perspectives.

Study Area:

The spatial concentration of this empirical research was a Southwestern district of Bangladesh; Chuadanga.

This district has an area of 1157.42 sq km (Banglapedia, 2007). Almost 1 million people live in this district. Major portion of the population are Muslims and partly Hindus and 48.28% of the entire population are women (BBS, 2001). Though the societies are agro-based, there are 37% farmers are landless. They have very little access to modern agriculture technologies. Nevertheless, the rural society is predominantly agro-based.

Fig.1: Chuadanga District



Source: Banladedepedia (2007)

Usually the Government is not capable enough to provide different livelihoods supports for the poor population in this area, and that is why, NGOs are very much active. Major active NGOs are Bangladesh Rural Advancement Committee (BRAC), ASA (Association for Social Advancement), Caritas, Grameen Bank, Janakalayan, Palli Unnayan Sangstha, Pratyasha, Srijani, Jagarani Chakra Foundation (JCF), Welfare Association for Village Environment (WAVE), Usha and Intercooperation. Most of the NGOs work with the poor people; but not so frequently with extreme poor. Simultaneously this is also true that the NGOs can provide different financial systems support, or little bit boost for income generating activities. Nevertheless, to break region-wide spatial poverty trap and to increase the area-wide employability is beyond the scopes and capacities of local NGOs.

The major determining factor of local economy is, it has international border with India. Local rural economics and livelihoods are based on Smuggling (Mazed, 2007). As there is no massive employment opportunity for the poor people, so they have last option to be involved with smuggling and to earn something atleast for their daily livelihoods expenses. When the border security is strict, then the poor have nothing to do. This “unstable” income, in fact, creates livelihoods vulnerability and makes people extreme poor.

There are two roads, which are under the RIIP project area of coverage. They are as follows:

Tab.1: Roads' names and lengths under RIIP

Upazila	District	Name of Road	Length (km)
Damurhuda	Chuadanga	Chitla-Bagirhat	11.84
Damurhuda	Chuadanga	Damurhuda-Karpasdanga	9.34

Source: GITEC (2009)

However, the traditional transport in remote rural areas has some common characteristics: (a)“Transporting” something is very much synonymous with carried out on foot; (b) most of the journeys in the remote rural usually involve carrying some small loads to a short distances; (c) major portions of the number of journey don’t intended for buying or selling some goods; (d) Vehicle ownership among the local people are very low; (e) in most of the cases, the transport burden falls very disproportionately on the women; and (f) most of the

generated trips are intended to meet up the basic requirement, e.g., collection of water, fuel-wood and food stuffs.

Spatial Poverty Trap in The Regional Context

Southwestern region of Bangladesh practically suffers from Spatial Poverty Trap. ODI (2007) mentions, as *"Spatial poverty traps may be geographically remote (remote regions or areas), they may be 'low potential' or marginal areas with poor agricultural or industrial potential, they may be 'less favoured' politically or they may be 'weakly integrated' into the nation state and into markets"*.

ODI (2007) mentions a holistic framework for understanding the spatial poverty trap under different geographical boundaries. That could be mentioned as follows:

Tab.2: A Conceptual Framework for Understanding Spatial Poverty Traps

Spatial Poverty Trap Description	Definition	Ecological Characteristics	Poor Infrastructure	Weak Institutions (Including Markets)	Political Isolations
Remote regions and areas (frictional distance and locational disadvantage)	Can include high and low potential environments. Cost of centrally supplied infrastructure and services are higher. Generally lower potential for non-farm activity, though remoteness offers some protection from competition. Poor urban residential areas remote from workplaces, with weak connections	Geographically isolated, may have low or high population densities with different implications for resource exploitation. Geographical obstacles, such as slopes, marshes, contribute to isolation.	High infrastructure costs lead to poor quality or absent provision. Poor road, rail, river connections lead to high transport costs.	Low economic diversity and lack of growth. Dependence on agriculture or natural resources, which are low return and lowest wage sectors. Little wage labour available: out-migration or commuting "solutions", but usually into low skill/return and insecure occupations. Few accumulation or expansion possibilities due to low demand. Few	Excluded. Relatively small (often-fragmented) constituencies. Political access more constrained because less competitive. Voices rarely heard, especially if also ethnic or religious minority.

				opportunities to augment skills, save, get credit. High risk for investments. Social capital may be high, but often excludes the poor or not useful for securing access to other resources.	
Low potential or marginal areas (ecologically disadvantaged)	Poor locations for built or productive environment: hillsides, roadsides, canal sides, riversides, dumps. Limited possibilities for technical change in natural resource based production systems.	High ecosystem diversity, fragile or degraded land resources, climatic variation. Bio-physical constraints limited rains, poor soils, steep slopes. Vulnerable to hazards, displacement.	Multiple costs to meet basic needs (shelter, water, transport, health, education) in settlements that are often unsafe and insecure. Low cash circulation because of low productivity. Dependence on remittances, public subsidy.	Poor economic and social infrastructure, over-population, low human and financial capital. Outmigration or commuting with positive and negative consequences depending on migrants' endowments. Includes poor areas within growth centres.	Political characteristics not usually considered but natural disadvantage may affect societal perceptions of people from such areas leading to stigma, discrimination and inequality. Illegal land holding increases vulnerability.
Less favoured areas (politically disadvantaged)	Can include high and low potential environments and pockets. Lower levels of infrastructure and services, stigmatised, "hardship posting". Private sector avoids investments; savings invested outside the area	No clear patters.	Lack of services for informal and illegal residents and enterprises. Low public investment in social protection and basic services leading to low cash circulation. Risk of falling out of labour market due to injury or death.	Limited market access, low population density, "residual" populations left behind, old, very young, disabled, ill, and discriminated.	Lack of protection against abuse by officials, lack of institutes able to safeguard and further citizen rights, no safety net.
Weakly integrated regions (poorly linked and economically disadvantaged)	Can include high and low potential agrarian environments, poorly serviced and connected	No clear patters.	Poor communities to commute or migrate; limited information on opportunities and rights.	Adversely incorporated into markets through explorative or uncompetitive economic	Politically marginal, unstable, liable to political fragmentation and conflict. Poor

	peri-urban and urban areas.			relationships; markets are fragmented and function weakly.	re-presentation in political assemblies.
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Source: ODI (2007)

In practical sense, Chuadanga District suffered from spatial poverty trap due to its frictional distance and locational disadvantage. Nevertheless, this district used to experience with poor quality of rural infrastructure, which offers poor regional rural-urban linkages. Low economic diversity ultimately ended with low economic growth and poor employability situation for the most disadvantaged groups; e.g. extreme poor women. Less interests for public and private investments along with less political attentions increased the intensity of spatial poverty trap.

Impacts through Spatial Poverty Traps:

Spatial Impacts

Poor accessibility, less investment and simultaneously less interests for investment from public and private sectors are the major impacts for making some people, in real sense, the most disadvantaged. In most cases, these dis-advantaged people cannot have access for jobs and opportunities and they remain excluded. This phenomenon leads them more vulnerable and impoverished.

Nevertheless, as the border relationship with India is not very good, therefore the Government's interest for large-scale investment is relatively low. Last few years, there were very low interests for investment from private sectors as well. Simultaneously NGOs did not offer the entire benefits of microfinance; they only introduced microcredit activities, which have virtually very high interest rates. Major victims of this entire scenario were the extreme poor women and they turn as the most disadvantaged groups in the society.

The spatial poverty trap due to the poor accessibility is not new. In most of the countries with developed economy, access for water or fuel is usually a matter for turning a tap or flicking an electric switch. However, for the extreme poor women in rural Bangladesh, it is a matter of physical movement. So whenever there is some poor accessibility that indicates exclusion from different livelihood opportunities.

Through some recent works, spatial reasons of creating people extremely poor has been identified from “transport accessibility” perspectives; e.g. lack of mobility and less proximity to supplies, services and facilities (Edmonds, 2004).

Socio-economic Impacts

The socio-economic impacts of spatial poverty traps are often perceived as a vicious circle with three components: unemployment (marginalisation in the labour market), poverty, and social isolation (UNDP, 2006). In rural Bangladesh, different components of social exclusions influence each other. Then this intra-influence creates a spiral of insecurity, which ends up with multiple deprivations. Deprivations usually begin with the loss or lack of employment, which in turns leads to a significant degradation in living standards. This phenomenon ultimately increases risk of poverty. “Living in poverty” creates additional difficulties in the search for employment and contributes to a long-term unemployment trap for many individuals. Concurrence of unemployment and poverty is the hindrance for the victimized persons regarding their participation in social activities. Due to the lack of money and stigmatizations, social ties are usually weakened and that increase the risks of being socially isolated. An extreme poor woman in the rural Bangladesh is the most precise example of this entire phenomenon.

Simultaneously in vice-versa, employability is an important aspect for the discussions of societal exclusions and „disadvantaged“ tragedies. Economic capabilities are closely associated with societal positions of an individual. Factors that are important for raising the enabling capacities to benefit from the economic opportunities and integrate better into the mainstream society include education, skills, and access to productive assets and finance.

In this region, low-level literacy, education and skills among the poor women are the major obstacles for their meaningful employability. Simultaneously access to productive assets and finance can be critical for the women’s empowerment. In this regional context, along with the absence of proper know-how, access to land and capital play the decisive roles poverty, unemployment and socio economic exclusion. If these poor women in rural Bangladesh can avail better access to capital in terms of credit along with some skills development trainings, then the poverty trap could lead to an ended process.

Poverty, Access and Infrastructure Linkages

This region received very limited institutional supports from the government for local economic development for ending up the spatial poverty trap (Ahmed, 2007). Lack of accessibility is one of the major determining characteristics of regional and local poverty. Disadvantaged people are not only excluded in physical term but also excluded from employability, financial resources, skill development trainings and information.

However, less employability is obviously one of the contributing factors of low income and lack of livelihood skills. Simultaneously when there is lack of access to land, which means, low production and income for the poor people. Poor health is another physical manifestation of poverty. In most of the cases, impoverished people suffer severely from different types of precarious diseases. They suffer from lack of health services as well as lack of access to clear drinking water.

International Development Assistance Project:

International Development Assistances is aid, which is given by developed nations or international development agencies to support and promote the economic, social and political development of developing and third world countries. Since the 1990s, the ideological re-structuring had happened and thus the concept "development cooperation" had replaced the traditional ideology of one sided wealth and specialised knowledge domination.

Even though Bangladesh is a democratic country, democracy could offer little to the extreme poor people. Weak governance and political instability turned the country's macro economic situation very much precarious. Obviously well institutionalised democracy could bring benefits to the country's poor people as a whole. In Bangladesh context, extreme poor people became always less attractive constituent for institutional party politics. To some extent, it is difficult and likely expensive to deal with the problems of extreme poor people within the short electoral periods. It is also more difficult for the politicians to deliver their commitments to the people living in the region which suffers from spatial poverty traps,

especially when the areas are geographically remote. International Development Assistancess play big roles to fill this gap.

There are several arguments for the aid to the poor in aid recipient countries and to groups among the population that have few income opportunities and resources. Poor people could play a vital role to promote the national economic growth. This applies specially in the countries like Bangladesh, where the industrial growth is impeded by too limited domestic market and is facing difficulties in competing on export markets. Increase of income for the poorest segment of the population in Bangladesh context, mainly lead to increasing demand for locally produced goods and thus act as an impetus for country's own productive sectors. Simultaneously there is a very good assumption that increasing income among the poor people re-structures automatically the social hierarchies, which are the basic pre-requisite for empowerment of the poorest segment inside the society (Martinussen & Pedersen, 2005).

Development aid and cooperation is a policy field where a big distance exists between the original suppliers of funds, for example, from taxes and voluntary contributions in the donor countries, and the final users, among them the poorest people in the developing countries (Martinussen & Pedersen, 2005). Furthermore it is a policy field where ambitions exists to be equally involved at both ends of the process: citizens and enterprises in industrial countries want to be active participants in cooperation with developing countries; and aid organisations consider local participation in aid supported activities in developing countries to be a pre-requisite for success and an aid goal itself.

In addition to poverty reduction as an over all development goal, and often as a part of it, most donors have formulated goals with focus on women and gender equality. Initially, the emphasis was on women as a vulnerable group- as a passive category of clients that had to be assisted and offered relief through special development assistance. This later changed to a perception of women as active human beings who, as producers and in other roles, could contribute significantly to development.

For the feminist scholars, "Development" became their area of concern since 1970s. It was a consequence for the failure of the "first decade of development (1961-1970)". Ester Boserup's *Women's Role in Economic Development* (1970) addressed this issue and acted as the major source of inspiration for theoretical and conceptual debates for the gender issues under the umbrella of comprehensive "development" (Naher, 2005). First World Conference

on Women in Mexico (1975) created a big mentionable multiplier effects on development thoughts from feminists' perspectives (ADB, 2001). Afterwards "Gender and Development (GAD)" appeared as one of the central themes of development debates and policies.

Description of Ongoing International Development Assistance Project:

The rural development philosophy is not new in Bangladesh context. First Rural Development Strategy was formulated by the Planning Commission in 1984. This Rural Development Strategy had the broad objectives for improving the livelihoods quality of the poor rural people. Those were as follows:

- a) physical infrastructure improvement including roads, markets and storage facilities;
- b) irrigated agriculture, minor drainage and flood control works;
- c) production and employment programmes for the rural poor.

As a continuation of that development strategy, Rural Infrastructure Improvement Project (RIIP) or Rural Development Project (RDP)-25 was initiated by the Local Government Engineering Department (LGED) under the Ministry of Local Government, Rural Development and Cooperatives, with the financial supports from the Asian Development Bank (ADB), the Federal Republic of Germany through German Financial Cooperation (KfW) and German Technical Cooperation Agency (GTZ). The project began in July 2003 (Kuhnle, 2005).

The major goal of the RIIP/RDP-25 is "*To reduce rural poverty through sustainable economic growth, rural development and improved infrastructure*"(Kuhnle, 2005). It was identified that inadequate basic physical infrastructure was the major reason for local and regional restricted access to many development opportunities (Ahmed, 2007). Due to lack of easy transportation among the services-oriented agricultural organisations, poor and dilapidated infrastructures are the major obstacles in promoting local economic development.

Local poverty level was high and for that Government of Bangladesh and International Development Agencies (e.g., ADB, KfW, GTZ) selected this region for the implementation of RIIP. Previously it was not only difficult, sometimes reach to some services (e.g., going to school for the schoolchildren) was big adventures.

Based on exiting need assessment and future potentials, RIIP planned to complete the following major physical components:

Tab.3: Activities, planned under RIIP Coverage

Major Activities	Length/Nos
New construction or upgrading the poor conditioned roads	1,110 km
Construction of bridges & culverts	5.05 km
Tree plantation & maintenance	800 km
Improvement of rural growth centres (e.g. rural markets)	68 Nos
Improvement of rural boat landing place (e.g., in local language, Ghats)	55 Nos
Construction of small ferries	5 Nos
Construction of Union Parishad (Local Government) Complexes	100 Nos

Source: Kuhnle (2005)

However, improving the rural roads and supporting infrastructure development through RIIP/RDP-25 have provided effective transport and communication for the rural disadvantaged people between the market and distribution sources. These improvements to the rural infrastructure are assumed to establish the foundation for better economic opportunities and would play a big role in poverty reduction.

Another priority of RIIP is to develop institutional and management capacity of the LGED and Local Government (e.g., Union Parishads). This capacity-building target will enable them to plan, manage, operate and maintain their local infrastructure in future and would help them to establish stronger local government.

Traditionally rural infrastructure improvement works were men's domain. Nevertheless, due to the increasing poverty in rural Bangladesh, women are gradually getting involved in road construction works. Poor women are involved now in the construction and maintenance of the roads, as well as in tree planting and stewardship, which has been promoted through Labour Contract Sharing (LCS) of LGED. This was initiated to provide fixed term employment for landless destitute women, as they could get an option to come out of poverty trap.

Pic. 1: Female Workers in RIIP Construction Works



Source: GTZ (2007)

The RIIP is now being implemented in two out of six divisions in Bangladesh; namely in Barisal and Khulna Division. These two divisions cover 25% land area of entire land area of Bangladesh.

Results and Analysis: Immediate Impacts

Direct Impacts on Employment Creation and Local Economic Development

Theoretically, local economic development (LED) is a locally owned, participatory development process in a given territory. It encourages partnership arrangements between local private and public stakeholders. Moreover, it enables the joint design and implementation of a common development strategy, which makes use of local resources and competitive advantages (ILO, 2007). This RIIP project in Chuadanga District was initiated to promote local economic development. Simultaneously to make the project more inclusive and pro-poor growth oriented, RIIP has been envisioned as an Employment Intensive Infrastructure Programme (EIIP).

However, the equality of rights between men and women are provided by the constitution of the Government of Bangladesh. Nevertheless, a patriarchal societal structure dominates severely the lives and livelihoods of extreme poor women. This dominance creates furthermore a control of women's everyday mobility, roles and responsibilities.

This programme introduced five innovative practices and policies, which are the key elements to the project’s success for integrating the extreme poor women in rural infrastructure development programme. According to Asian Development Bank (2003), those are as follows:

- a) specific market sections’ development for the disadvantaged women group;
- b) participation in road construction, maintenance and tree plantation;
- c) rural road infrastructure design through gender sensitive approach;
- d) partnership with local government organisations and
- e) institutionalizing gender issues through project implementing agencies.

Empirical evidence shows that most of the poor women, who were previously most disadvantaged socially and economically, are now involved income generating activities as well as small and medium size enterprise development (Ahmed, 2007). Their working involvement other than households works are as follows:

Tab. 4: Number of Working Days of Most Disadvantaged Women²

Number of Days	Number of Respondents	Percentage (%)
200-365 days	62	94%
199-150 days	3	4.5%
100-149 days	0	0%
Unknown	1	1.5%

Source: Ahmed (2007)

There were significant increase of local employment creation through the roadside of Chitla-Bagirhat and Damurhuda-Karpasdanga, which are the roads under RIIP’s coverage in Chuadanga District. More precisely, two types of direct employment opportunities along with Microsavings have helped the disadvantaged women to be economically and socially empowered as well as for the development of local economy. Those are as follows:

² Representativeness of this information could be arguable. Sample size was relatively small in comparison to the real population and selection was random, but with proper spatial representation within the region.

Employment during the road infrastructure development activities: During the construction phase, several un-skilled and semi-skilled women were employed. Most of them are extremely poor.

The impacts of 6.4 Billion Taka invested in infrastructure development of entire region under the RIIP/RDP-25 have been a matter of interest to the planners, policy makers and development partners. The direct impacts are on the labour market, which is easy to ascertain. The indirect impacts are rather complex and those need time to materialize. It should to mention that the direct impact in the regional economy in the form of rural income and employment and the impact of road maintenance in 20 years life time of the project.

Employment through maintenance and tree plantation: It is relatively more stable employment opportunities for the women. They are engaged in carrying out the routine maintenance of road embankment slopes and earth shoulders as well as plantation and caring of trees. Moreover, these women usually get different types of skill development trainings and social development inputs for SME development.

Microsavings: Access to traditional micro credit is not always available due to NGOs' spatial and institutional preferences. So for these extreme and most disadvantaged women who are involved in this RIIP also try for making small savings for themselves. They mention that as "Microsavings".

According to the regulations of their contract (LCS), they should to open a bank account and deposit a certain amount of their monthly income, and they can take money whenever they want. In most of the cases, the women take the money out from their savings account on different household purposes; e.g. medical treatment, education, entertaining relatives and guests and celebrating festivals. So it doesn't create any substantial savings at the end of the contract as they could create a new small scale enterprise.

This situation was addressed firstly by the LGED field officials and after discussing with GTZ and ADB, they proposed a new strategy that how the labour women could develop their own capital by their own managed micro financing. Otherwise, after their contract in this project, the women would again return to their previous poverty situation.

The practice of micro-finance within RIIP is very much traditional in nature. But the major aspect is, this is fully managed by the clients themselves and so there are least chances of being exploited with their self owned capital fund.

Within this self-managed micro-financial system, the women select their president and cashier. All women should to save at least 2 Taka/day (1 USD = 68.65 BDT). However, if any one wants to save more, that would be highly welcomed. The president will open a joint bank account and save the money there. Theoretically, the women can get the money at the end of the programme or end of their contract with RIIP. They could also get back the money after a certain period, for example after 6 months, for developing their own small and medium size enterprises.

Simultaneously once a week, after their daily work, they usually discuss about the management, operation and prospects of their self-managed micro financial system. Initially LGED requested their supervisors, who are educated at least until secondary school certification, to guide the women to get some specific ideas of the micro-credit management system. During their informal weekly discussion, they also share with each other about the possible new avenues of investments and associated trainings and information.

In brief, the poorest and most disadvantaged people need more supports as they could survive and could come out of the poverty trap. Sen & Hulme (2006) highlighted this before as by mentioning, *"The poorest are not like the poor but 'a little bit poorer'. They may benefit from policies to help the poor, but need other policies as well"*. RIIP is one of the worth example of that. The benefit of employment intensive infrastructure programme has not only impact through direct employment creation, but also stimulates the local economic development in many ways. Firstly, locally spend wages would create a substantial indirect economic impacts as well as economic activities and secondly, it also enhances the capacity of the local entrepreneurs and administrators. These two things in fact ensure the economic opportunities for most of the rural poor and reduce the transport and marketing costs to a high degree.

Access to Markets and Improved Mobility

From a recent inventory it was evident that villages reported a higher number of average weekly visits to markets (5.1 per week), respectively the improved growth centre (2.5 per week) than before the RIIP intervention (2.5 weekly visits to markets, 1.6 visits to the growth centre). The share of women buying from the local market was 32% (which is already a rather high figure in the context of Bangladesh), but it was 0% before the project's inception. This phenomenon indicates that to what extent the road improvement can induce overall changes in a society and contribute to a better gender balance (Kuhnle, 2006).

Pic. 2: Food (Snacks) sellers in rural markets



Source: Ahmed (2007)

Another inventory shows that the substantial level of decrease in travel cost and leads direct to a higher disposable income at household level. In addition, timesavings contribute indirectly to a higher disposable income (GITEC, 2006).

Usually, a switch from lower-level/non-motorised to faster, motorised vehicles is observed after road improvement. This trend was also confirmed by different surveys.

Tab. 5: Transport-wise Comparison of Average Annual Daily Traffic (AADT)

Mode of Transport	Baseline AADT	Terminal AADT	Changes
Auto rickshaws/Tempo	477.0	4125.0	764%
Jeep/Car/Taxi	25.0	93.0	279%
Micro/Pickup	42.0	235.0	465%
Motor Cycle	3653.9	5425.6	48.5%
Bus/Mini Bus	1.1	151.0	13628.9%
Truck/Tractor	175.7	467.4	165.9%
Rickshaws	3.028.1	4641.2	53.3%
Rickshaw Van	6891.8	14699.8	113.3%
Bicycles	16356.3	22566.0	38.0%
Bullock Cart	309.6	87.4	-71.8%
Push Cart	223.5	64.9	71.0%
Passengers with Load	2626.5	8944.7	240.6%
Passengers without Load	21143.1	35286.8	66.9%

Source: RIIP Baseline Survey 2004 and Terminal Survey 2008.

In broader perspective improved market accessibility and increased mobility created opportunities for the local suppliers, farmers and poor women to sell their products and vegetables not only in the big cities in Bangladesh, but also in Europe and North American markets.

Self Employment Scenario

The employability situation among the disadvantaged women group got much better after the RIIP project inception. Employability is termed as "a person's capability of gaining initial employment, maintaining employment, and obtaining new employment if required. In simple terms, employability is about being capable of getting and keeping fulfilling work. More comprehensively, employability is the capability to move self-sufficiently within the labour market to realise potential through sustainable employment. For individuals, employability depends on the knowledge, skills and attitudes (KSA's) they possess, the way they use those

assets and present them to employers, and the context (e.g. personal circumstances and labour market environment) within which they seek work" (Wikipedia, 2008).

During and after the RIIP in Chuadanga, the inflow of investment has increased substantially. The mobility among the extreme disadvantaged women has increased. The remote areas are now getting under operational areas of NGOs rural financial services. Different types of employment opportunities for the poor women are now being explored everyday.

Moreover, along with the present employability the extreme poor women also very much optimistic about their future livelihood. Different employment generation components of RIIP have turned their livelihoods from socio-economic marginalisation to inclusiveness. Empirical evidence in 2007 also indicates the same scenario:

Tab. 6: Livelihoods Perception of the Disadvantaged Women after the Inception of RIIP³

Livelihood Perceptions for the Future	%
Better	95%
No changes	0%
Worse	0%
Better + worse	0%
No idea	5%
Unknown	0%

Source: Ahmed (2007)

Improved Food Security Status

Rural infrastructure improvement has relationships with agriculture production and income which are both related to food security. The improvement of infrastructure may increase production and employment and thereby improve food sufficiency.

³ Representativeness of this information could be arguable. Sample size was relatively small in comparison to the real population and selection was random, but with proper spatial representation within the region.

Food sufficiency usually estimated in terms of security of food during the number of months per year. The RIIP baseline survey 2004 and Terminal survey 2008 reveal that the project area is a food deficit area. Before road development, the share of households with a food surplus was 18.9%, which rose to 42.3% households after the road development. The share of households with a food sufficiency of 12 months increased from 19.8% to 26.8%. The following table presents the summary results:

Tab. 7: Changes of Food Sufficiency Status

Food Sufficiency Status	Baseline (%)	Terminal (%)
Food Surplus	18.9	42.3
Secured for 12 months	19.8	26.8
Secured for 9 months	11.6	12.1
Secured for 6 months	12.3	4.8
Secured for 3 months and less	17.4	13.8
No answer	19.9	0.1
Project Total	100.0	100.0

Source: RIIP Baseline Survey 2004 and Terminal Survey (2008)

Results and Analysis: Long Term Impacts

Access to Health Facilities

At the macro level, there is a significant relationship in the developing and under-developed countries between infant mortality and the access to health services (World Bank Study, 1994). Therefore, if there is poor access to rural health facilities, people would remain unhealthy, children would suffer from malnutrition, diseases and any epidemic could have catastrophic impacts. For struggling with this, the poor disadvantaged people usually spend a major portion of their income for the medical treatments for themselves or for their family members. With poor health condition, they would be unprivileged from any type of labour-based working opportunities. In the same way, if they have poor access to clean drinking water, they would also suffer from diseases.

During and after the implementation of RIIP/RDP-25, the accessibility to the locally available health facilities were developed substantially in rural areas near Chita-Bagirhat and Damurhuda-Karpashdanga road.

Kuhnle (2005) mentions this phenomenal change as, *"The average travel time to the next health facility was 43 minutes in the project villages, and 132 minutes (more than two hours) in the control villages (Control villages are those villages, which is not in RDP-25 coverage area). Timesaving in reaching the health facilities over the five years were observed by 70% of respondents in the project villages, but only by 2% in the control villages. The timesaving were mainly achieved by switching from on-foot travel to the use of bus or tempo, while no such modal shift could be observed in the control villages. Probably as a result of improved access to health facilities, 87% of the respondents in project villages reported that the health condition of the family has improved over the past 5 years, as against 32% in control villages."*

He also mentions that 67% respondents in project villages now have better access to safe drinking water. On the other side, 56% from non-coverage area enjoys the same level of access to safe drinking water.

Access to Skill Development Training & Education

RIIP/RDP-25 has explored also new avenues for the education and skill development trainings for the disadvantaged women. Firstly for them, and secondly for their children. Through their involvement at this employment intensive infrastructure programme, they usually get financial management and skill development training. Simultaneously for the better accessibility than previous, local and regional NGOs are getting more and more interest to expand their activities in this region. So within their entire development package for the poor women, there also offer different types of skill development trainings; especially for SME development.

Nevertheless, their children get better access to the school than previous. In Bangladesh, the female education upto higher secondary level is free. They also get small stipend to cover their academic expenses. However, due to poor infrastructure, going to school in rural areas was never an easy task. After the RIIP intervention, the scenario has changed dramatically.

59% girls student from extreme poor family are now enrolled in primary schools, which was previously only 32% (Kuhnle, 2006).

Increased Social Interaction

The RIIP intervention through Chitla-Bagirhat and Damurhuda-Karpashdanga roads put a rigorous intervention within this multiple deprivation dynamics. RIIP offered the extreme poor women employment and better access to different livelihood support services. Several empirical evidences indicate that the radius of interaction has increased through the improvements of rural roads (Ahmed, 2007). A major fact behind this phenomenal change is, a distinct modal shift from on-foot movement to use of bus or small vans for visiting the relatives.

Opportunities for Increased Investments

The most disadvantaged women, who are extremely poor, had no way to maintain their livelihoods expenses with limited local employment opportunities. After this rural infrastructure development programme, several external investors were attracted for investments. Availability of cheap local labour forces was the main reason. Inflows of these external investments created also handful amount of local employments, which ultimately played a big role for integrating the poor women in the mainstream society. In the recent years, the trend of NGOs involvement in the region as well as external investors' investments for handicrafts made by the poor women mentionably increased.

Discussions and Conclusion:

Policy Options for Optimising the Development Outcomes

There is a basic assumption for breaking the spatial poverty trap among the most disadvantaged women. The assumption consists of three major aspects. Firstly, the women should possess proper employability. Secondly, they should have access to basic services, e.g., health facilities. Finally, it is also true that in most of the cases the women's capacity for employability is not sufficient as they could get benefit from all offered government and

private opportunities. These women need some more feedbacks and inputs. May be some supports through skills development training.

For this specific spatial boundary alongside of Chitla-Bagirhat and Damurhuda-Karpashdanga Road, if the development outcomes need to be optimised then there should be sufficient offer and inputs from rural financial services. Then the most disadvantaged women could enjoy from small credits and they can think for further investments. Capital is one of the biggest problems for the poorest. In most of the cases, local NGOs target beneficiaries are moderately poor; not the most disadvantaged extreme poor women.

Skill development training should be another area of concern if the target is inclusive growth through this employment intensive infrastructure programme. If the extreme poor women get some training, then they could think for further micro, small or medium size enterprises. Otherwise, if they only get money as credit without the proper knowledge for investment, then the entire income through RIIP might be consumed only for household purposes; nothing would be for further employment creations.

Nevertheless, most of the extreme poor women have almost no access to health facilities and legal supports. These are now popularly mentioned as micro-insurance. Through by using the newly built roads, they can have access to these facilities. Nevertheless, there should be some door-to-door services for them at least for health facilities. These women suffer also a lot from legal problems; like conflicts on land rights. Usually they get afraid to go to Judicial Court as that might cause for them a lot of financial investments as well as non-understandable complications.

Simultaneously, there should be sufficient coverage of rural electricity. The welfare impact of rural electrification is simply immense. It can enhance the livelihood patterns of the poor women by providing better access for production as well as for consumption.

Possible Risks

There could be some long-term negative impacts or risks through RIIP/RDP-25. Some could be mentioned as follows:

Societal: Illegal Smuggling could be increased through this area. Nevertheless, there could be some other negative societal impacts. A similar study was done in Melamchi-Timbu road project in the Helambu region, Nepal. A locally increased societal problem was highlighted as follows:

"Many of the young women and Girls from High Mountain regions of Nepal are trafficked to India and other Gulf countries for the sex purpose. Those trafficked women often suffer physical, mental and psychological trauma. Maiti Nepal (a local NGO working against Trafficking Women and Girls in Nepal) estimates thousands of Nepali girls are working as sex girls/women in Indian brothels, whose condition is said to be sub-human. Many of them are already infected with HIV/AIDS and have spread it to others" (Nepal, 2007).

As the spatial location of Chitla-Bagirhat and Damurhuda-Karpashdanga Roads are very close to border region, this similar issue of Melamchi-Timbu road project should to be addressed for tackling any future societal problems.

Institutional: Natural Disaster is a common and yearly phenomenon in Bangladesh. In Chuadganga district, heavy monsoon and floods are the major natural disasters. This could be a usual event that the road conditions would be dilapidated. Moreover, for reconstruction works government need again the finance. Most of these rural roads construction projects are heavily dependant on foreign grants and loans. It might not be always an easy task to get finance from overseas development agencies. Nevertheless, if government do not pursue for reconstruction then the entire regional socio-economic structure could collapse. Government should be very careful and attentive to this futuristic, but realistic issue.

Economic: For the better accessibility, it might be very easy for the local people to go to the rural town. But if the major economic and investment-flows follow the same trend then the objectives for local economic development as well as economic and social empowerment of the most disadvantaged women would remain as an un-attained development target.

Ecological: It might have some ecological impacts. For example, impact on wildlife includes individual species disruption, habitat loss and fragmentation. RIIP might have also some impacts on physical surfaces like erosion and land slide; change the surface of water flows and loss of soil, lands and its productivity. The road construction can also change the water level temperature that directly affects aquatic habitat and fish populations.

Scientific and Practical Significance

Rural road has direct and indirect impacts on achieving the Millennium Development Goals (MDGs). It reduces absolute poverty by increasing economic efficiency and by lowering costs and prices as well as enhancing access to social and economic opportunities. GITEC/GTZ (2006) mentions the contribution of RIIP for achieving the MDGs goals and objectives as follows:

Tab. 8: Contribution of RIIP towards the Millennium Development Goals

MDG	RIIP's Contribution
Goal 1: Eradicate extreme poverty and hunger	-Employment Generation (immediate, long-term) -Lower transport costs and thereby increase the real incomes -Time savings
Goal 2: Achieve universal primary education	-Access to education
Goal 3: Promote gender equality and empower women	-Female Participants in Local Governance and Market Management Committees -Decrease of Wage differences for equal work -Promotion of female labour
Goal 4: Reduce child mortality	- Access to health - Road Safety Campaign in Road Safety
Goal 5: Improve Maternal Health	- Access to health
Goal 7: Ensure environmental sustainability	- access to an improved water Source - Sanitation

Source: GITEC/GTZ (2006)

The development of rural infrastructure usually has two major objectives. Firstly, poverty alleviation & improving the quality of life and secondly, improving the local economic growth and opportunity for the disadvantaged people. In fact, if people do not have substantial income base, they cannot pay and have access for government services. Therefore, some

people remain impoverished. This is one of the major features of developing countries. Simultaneously local and central government also suffers from financial and institutional incapacities for further development works. In that sense, RIIP played a big role and put specific impacts for achieving the national MDGs goals and targets.

CONCLUDING REMARKS:

In countries like Bangladesh, previously there was a widespread “policy failure” to address spatial poverty traps and geographical remoteness. Big cities were at the centre of all development concerns. It should not be assumed that the policies and programmes, which are successful in the big cities, could also be effective and replicable in the regions, which suffer from spatial poverty trap. The focus on livelihood improvement in non-remote areas usually not considers the risks of exclusion or marginalisation. However, socio-economic exclusion and marginalisation are the major features of remote rural areas in Bangladesh. Rural road infrastructure could play a vital role against all these negative societal aspects. Nevertheless, there is a big debate and dilemma that which type of transport should be made available for whom, by whom and the extent of incorporation with regional development goals.

RIIP through the construction of Chitla-Bagirhat and Damurhuda-Karpashdanga road has established a good example of employment intensive infrastructure programme in the context of a developing country. The most disadvantaged women, who are extremely poor, were incorporated in the road construction and the maintenance phase. Therefore, the employability situation has improved a lot among the very poor women, who were treated usually as forgotten populations in most of the development plans. The core concept of this RIIP could be replicated in rural areas of other under developed and developing countries, where spatial poverty trap play a big role in shaping the socio-economic structure of local societies.

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